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SOME DEVELOPMENTAL ANTECEDENTS OF LEVEL OF ASPIRATION.

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THIS STUDY REPORTS CHILDREARING PRACTICES AND CHILD BEHAVIORS ASSOCIATED WITH A SUBSEQUENT LEVEL OF ASPIRATION (LOA). ANTECEDENT MEASURES WERE CHILDREARING ATTITUDES REPORTED BY 379 MOTHERS OF FIVE-YEAR OLDS IN AN EARLIER STUDY. AT THE TIME OF THIS STUDY, THE 83 SUBJECTS WERE 18 YEARS OLD. THEY WERE ADMINISTERED TWO PERSONALITY SCALES AND THE ROTTER LEVEL OF ASPIRATION BOARD. THE LOA YIELDS THREE SCORES CAPABLE OF YIELDING NINE PATTERNS WHICH DESCRIBE AN INDIVIDUAL'S OVERALL APPROACH TO THE PROBLEMS OF GOAL STATEMENT AND GOAL CHANGE. STATEMENTS OF HIGH GOALS INCONSISTENT WITH PAST ACHIEVEMENT SHOW CONSISTENT AND SIGNIFICANT TENDENCIES TO BE ASSOCIATED WITH EARLIER MATERNAL PUNITIVENESS TOWARD AGGRESSION AND DEPENDENCY, HIGH MATERNAL ANXIETY, AND MORE PREVALENT OBEDIENCE PROBLEMS. FAILURE AVOIDANT LEVELS OF ASPIRATION ARE ASSOCIATED WITH MATERNAL PROTECTIVENESS, WARMTH, AND GREATER PERMISIVENESS IN SEXUAL SOCIALIZATION. SEVERAL DIFFICULTIES LIMIT THE VALIDITY OF THE STUDY. THE ORIGINAL STUDY WAS NOT DESIGNED FOR EVENTUAL RESEARCH ON LOA. MUCH OF IMPORTANCE TO GOAL STRIVING BEHAVIOR UNDOUBTEDLY OCCURRED DURING THE 13 YEAR INTERVAL. MATERNAL REPORTS OF CHILDREARING PRACTICES ARE POSSIBLY UNRELIABLE. THE FINDINGS SHOULD BE REGARDED AS SUGGESTIVE RATHER THAN DEFINITIVE. (AUTHOR/PR)

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Some Developmental Antecedents of Level of Aspiration

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This study reports the childrearing practices and child behaviors at age 5 associated with level of aspiration (LOA) at age 18. The Potter Line Board, a measure of goal-setting behavior, was administered to 83 adolescents whose mothers had participated 13 years earlier in the Sears, Maccoby, and Levin interview study of childrearing. For both LOA D-scores and patterns there is a consistent and significant tendency for defensively high goal setting to be associated with earlier punitiveness toward aggression and dependency, high maternal anxiety, and more prevalent obedience problems. Failure-avoidant LOA tends to have emerged from maternal protectiveness. These findings, however, while spanning a 13 year period and showing consistency, must be regarded as suggestive rather than definitive given the large number of comparisons made.

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The concept of level of aspiration was first applied to goal-setting behavior by Dembo (1931), and in the years following Lewin and his students subjected the setting and changing of achievement goals to an exhaustive theoretical and experimental analysis (Lewin, Dembo, Festinger, & Sears, 1944). Although many of the early studies and much of the Lewinian work as a whole were concerned with the conditions affecting change in level of aspiration -- for example, success and failure (Festinger, 1942; Hoppe, 1930); the sequence of task difficulty (Frank, 1935); reference group standards (Chapman & Volkman, 1939) -- the significance of goal-striving for the study of personality was also appreciated.

There is a considerable personality-centered literature on level of aspiration, dating back to the 1930s, recognizing the close link between individual patterns or styles of goal-setting and self-evaluation. The level of aspiration paradigm -- the statement of an expectancy or bid, performance on the task, and the setting of a new level of aspiration -- presents the subject with a problem in self-evaluation, and the way he solves it provides a basis for making some important and general inferences about his self-confidence or self-esteem in a wide range of achievement and social situations. Among the major and established findings are relations between patterns of goal setting and history of achievement success or failure (Jucknat, 1937; Sears, 1940, 1941), adjustment history and physical deformity (Rotter, 1942), adjustment-maladjustment (Escalona, 1948), psychosomatic illness (Cohen, 1950; Scodel, 1953), and conformity (Crowne & Liverant, 1963; Ogel., 1959). Two general conclusions clearly emerge from the work on level of aspiration as a measure of self-evaluative behavior. First, level of aspiration is curvilinearly related to measures of maladjustment; subjects independently identified as maladjusted tend to state very high or very low

goals. Second, experimental analyses of level of aspiration by Holt (1945, Rotter (1942), and Sears (1940) suggest that the level of aspiration situation arouses the kinds of defensive processes which characterize individuals' attempts to avert failure. Many of the studies cited above suggest that controlled level of aspiration situations evoke widely generalized defensive modes by which the anticipated consequences of failure are avoided. Not very much is known about the developmental antecedents of level of aspiration behavior, although it is established that consistent goal striving appears in very young children and can be observed on controlled tasks by the age of 3 1/2 to 4 (Anderson, 1940; Heckhausen, 1967). There are/the nAchievement findings of Winterbottom (1958) on the relation between early independence training and nAchievement, and high nAch tends to be associated with more realistic and appropriate goal levels in risk-taking situations (Atkinson & Litwin, 1960; McClelland, 1958). The more general relation between n/achievement and patterns of level of aspiration behavior, however, has not yet been worked out. It is fair to say that the childrearing antecedents of level of aspiration and the generalized self-evaluative behaviors which are involved in goal setting have not been systematically investigated.

This study, part of a larger project investigating self-evaluative behavior and its development, inquires into the childrearing antecedents of level of aspiration. The antecedent measures, childrearing attitudes and practices reported by mothers of 5-year-old children, were collected in the Sears, Maccoby, and Levin (1957) study, Patterns of Childrearing. The level of aspiration measure was given to young adults whose mothers had been interviewed about their childrearing practices 13 years earlier. The design of the study precludes the collection of childrearing data theoretically linked to level of aspiration and to self-evaluative behavior since the

antecedent data were given and not originally intended to test hypotheses relating to these variables. Thus, this is an omnibus kind of attempt -- a frank fishing expedition -- to make a preliminary identification of some of the childrearing variables related to level of aspiration behavior in early adulthood. Another barrier to the testing of specific hypotheses about the association of childrearing variables and patterns of level of aspiration is that theories of aspiration behavior are process theories concerned with change and maintenance of expectancies of goals in self-evaluative situations (Lewin et al, 1944; Festinger, 1954), and they do not specify the content variables accounting for the initial acquisition of individual consistencies in goal-setting behavior. There does, however, seem to be one general proposition to examine: since level of aspiration goal discrepancy scores are curvilinearly related to maladjustment, we might expect that those childrearing practices leading to maladjustment would be associated with the setting of extreme (very high or very low) goals. A low level hypothesis is that critical childrearing practices in this case ought to cluster around severity of socialization -- unpermissiveness and high punitiveness in the socialization of the major behavior systems and perhaps maternal coldness.

Method

Subjects

The subjects were 83 young adults, 46 males and 37 females, whose mothers had reported their childrearing practices in the Sears et al study in 1951-1952. They were, at the time of our follow-up in the winter and early spring of 1964-1965, 18 years of age. From partial records dating from the 1958 follow-up (Maccoby, 1961; Sears, 1961) and some subsequent contacts with these subjects, a list was compiled of the addresses of the

original participants. The attrition by 1958 was already considerable -- from 379 to 160 -- and by 1965 approximately 100 subjects could be located. Of these, a number were away at college; those who came home for Christmas vacation were contacted, and several were run over the holiday. By and large, the subjects we were able to contact were those who lived in the same residences they had in 1952.

All the listed families were contacted by telephone, the nature of the follow-up was described, and the subject child of the original interview was invited to come to the Department of Social Relations, Harvard University to complete several measures. A small honorarium and travel expenses were offered. Appointments were scheduled for subjects in small groups of 3 or 4, and they were administered the various measures by the three of us.

Procedure

When subjects appeared for appointments, they were given two personality scales. Following which half of them performed on the level of aspiration task. For the remaining subjects, a measure of sensitivity to emotional communications preceded level of aspiration performance. This order of administration was routinely maintained, and there appears to have been no effect of task order on level of aspiration behavior.

The level of aspiration measure was the Rotter (1942) Level of Aspiration Board, a goal-setting technique which involves the statement of expectancies on a motor skills task. With a cue, the subject hits a small steel ball down a grooved board numbered at the far end from 1 to 10 and back down to 1. His aim is to get the highest score possible. Before each trial he states a bid or expected score. Success is defined as reaching or exceeding the bid, failure as falling short of it. A goal discrepancy (D) score is calculated

from the computed discrepancy between previous success or failure and subsequent estimate. The number of times shifts in estimates occur is also recorded, and the number of unusual shifts (down after success, up after failure) is a second shift score. These three scores may be combined to yield a series of nine patterns which describe an individual's overall approach to the problem of goal statement and goal change. Rotter (1954) has described criteria for the assignment of these patterns and reported satisfactory inter-judge reliability. The reliability of pattern assignment in this study was assessed on individual patterns and on the pattern groups described below. The percent agreement between two judges* was 79 on individual patterns and 88 when the patterns were grouped.

These four measures profile the consequent variables of this study. The patterns were classified in three groups established in previous research (Crowne, 1965; Crowne & Liverant, 1963): Patterns 1 and 3, the achievement-oriented, realistic goal-setting styles (stability is present, there is an absence of unusual shifts, and goals are appropriately higher than past achievement); Patterns 2, 4, and 7, which involve the avoidance of failure by overcautiousness (negative D scores, shifts down after success, and a lack of stability); and Patterns 5, 6, 8, and 9, the more frankly maladjusted group in which leaving the reality of the situation is seen in avoidance of self-evaluation and the stating of wishful estimates (unrealistically high D scores, a refusal to shift or marked lack of stability in shifting, and the presence of many unusual shifts).

* Crowne and Julian B. Rotter

Results

Characteristics of the Follow-up Sample

With the high level of attrition from the original study, it is important to examine the comparability of our subject sample to the demographic characteristics of the 1952 families. We might anticipate some differences since the follow-up subjects came from stable families maintaining the same residences for nearly 15 years; lower social class families and the upwardly mobile would be lost. That is not the case, however: on the revised Warner index (Warner, Meeker & Eels, 1949) used to scale socioeconomic status in the original study, our follow-up group does not differ significantly from the total 1952 sample. Neither is there a difference between our follow-up cases and the 1952 sample in mean number of children per family. These data are presented in Table 1.

Insert Table 1 about here

While there may well be differences between the follow-up and original groups on other variables, the characteristics of the original group have been well maintained on these major demographic variables.

Analyses of Childrearing-Level of Aspiration Relationships

The three level of aspiration scores -- D, number of shifts, and number of unusual shifts -- were correlated with each of the 188 scales on which the parental interviews were rated in the Sears et al study. Several additional summary scales, which in effect represent factor scores as in Hilgard (1957) factor analyses of 64 of the original scales, were included. These correlations were computed separately for males and females as well as

for the total group. As a way of testing for curvilinearity, the distribution of level of aspiration D scores was divided into quintiles, separately for each sex, and analyses of variance for each childrearing variable were computed with the quintile groups as the classification variable. The relation of the level of aspiration patterns to each of the childrearing variables was assessed by analysis of variance, using the pattern groups described above.

Tables 2, 3, and 4 present for each sex and for the sexes combined the correlations significant at .10 or beyond between the childrearing variables and the three level of aspiration scores.

Insert Tables 2, 3, and 4 about here

The first thing to notice is that these correlations are preponderantly in the .20s and .30s; a very small proportion reach .40. Clearly the correlation of reported childrearing practices and maternal characteristics when the children were five years of age and their level of aspiration performance in young adulthood accounts for a fraction of the variance. The patterns of correlations for the three level of aspiration measures show some differences, a result to be expected since the meaning of the three scores is not identical. The D score is the primary and clearest measure of goal-oriented behavior: very low D scores indicate overcautiousness and a tendency for direct failure avoidance, and D scores in the very high range suggest the avoidance of self-evaluation by the fantasy-like substitution of goal statement for the realistic appraisal of one's attainment. The number of shifts is primarily a stability measure, ranging from extreme lability to lack of stability. The unusual shifts measure is indicative of high expectancies of failure and the defenses used in its anticipation -- avoidance

or wide of overassimilation. This index is complicated by the lumping together of two kinds of shifts with different meanings -- up after failure and down after success -- which are not ordinarily seen together except in the infrequently occurring Pattern 9. They cannot be segregated, unfortunately, because there are not enough of each type to give a reasonable distribution.

The pattern of relationships for males and females is somewhat different. For males, high D scores are associated with earlier maternal childrearing anxiety, limited affectional interaction in infancy, maternal severity in handling feeding problems and a more severe reaction to weaning, high demands for table manners, high pressure against sex play, greater warmth toward the child beyond infancy, high demands for the child to be aggressive (i.e., to fight his own battles), high use of physical punishment, and high punitiveness in the socialization of aggression and dependency (Summary Punitiveness scale). The mothers of the high D score adolescents had less responsibility for family policy and became warmer to their children after infancy. On the shifts measure, warmth in infancy, higher permissiveness for masturbation, high importance attached to school achievement, high use of reasoning and more inconsistent discipline, low rejection of the child and high permissiveness in the early socialization of sexual behavior appear to be the important correlates of a high number of shifts. The mothers of adolescents with a high number of unusual shifts tended to be more severe in the socialization of sexual behavior (although they exerted less pressure for modesty), had more time to play with the child, attached high importance to school, spanked more often, were more inconsistent in disciplining, and had children who gave early evidence of conscience development.

The high D scores females tended to come from larger families, were more

likely to have had frequent early separations from their mothers, were subjected to somewhat greater restrictions at meals and with radio and TV, had longer bowel training to which they reacted less, were more disobedient, were taught by their parents before starting school, and were more often rewarded with tangible rewards and punished by physical means. A high number of shifts in girls is associated with early maternal coldness, low pressure against childhood sex play, less time for the mother to play with the child, preschool teaching, low permissiveness for aggression toward other children, high conscience development, use of tangible rewards, parental agreement on child-rearing, and greater parental strictness. A high number of unusual shifts in females goes along with less warm mother-infant interactions, scheduled feeding, high neatness demands, greater physical restrictiveness, preschool teaching, high aggression demands, punishment for dependency, and high punitiveness for intrafamily aggression and dependency. Girls with many unusual shifts tended to come from higher SES families, their mothers were employed during the child's first two years, and their mothers were more delighted when the child started school.

These findings are generally repeated in the correlations for both sexes combined: higher punitiveness for intrafamily aggression and for dependent behavior, high use of physical punishment, high maternal anxiety about the rearing of children, more frequent obedience problems, somewhat greater restrictiveness during meals, and early emphasis on school achievement are the major correlates of later high goal discrepancy scores. The matter of overlap for the two shifts measures are similar to those found for each one alone.

The curvilinearity analysis, involving the quintile D score groups and separate ANOVs with each of the childrearing variables, failed to yield any evidence of curvilinear relationships. The pattern of findings is essentially similar to the results of the correlational analyses just described; the high and low D score groups did not cluster together.

The pattern group findings are reported in Tables 5 and 6 for males and females separately. For males, there is a consistent trend for the pattern groups associated with higher D scores (Patterns 5, 6, 8, and 9 and Patterns 1 and 3) to be differentiated from the failure-avoidant pattern group

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Insert Tables 5 and 6 about here

(Patterns 2, 4, and 7) on several variables: demands for table manners, pressure against sex play, aggression demands, maternal dissatisfaction with her education, and maternal anxiety about childrearing. On the summary punitiveness scale, which clearly and consistently relates to D scores, however, the most disturbed pattern group did not differ from the other two; the only difference to appear was between the achievement-oriented group (1 and 3) and the failure-avoidant pattern group. Subjects with the failure-avoidant patterns were more likely to have had mothers who used withdrawal of love as a socialization and control technique, and made greater use of isolation; their fathers were more likely to have been involved in childcare. The 5, 6, 8, 9 group mates were more dependent as small children than the failure-avoidant group and less concerned (were less horrified with) their mothers.

An other trend appears here for the first time: the most troubled

scale and the Prosocial aggression scale. A number of the children in our follow-up sample were in the 1958 follow-up group. A number of measures principally dealing with aggression were administered at that time, when the children were 12 years old. A revised version of Gough's (1957) Femininity (Fe) scale was also given. Pattern 5, 6, 8, and 9 males were more feminine than the other two groups at age 12. Concerning prosocial or socially appropriate aggression, the failure-avoidant and more disturbed pattern groups both tended to have higher (more aggressive) scores at age 12 than the more realistic pattern group.

The analysis of pattern relationships to the antecedent variables for females reveals trends similar to those for males: in general, the high D score pattern groups were subjected to greater punitiveness in early childhood, greater punishment for dependency, greater severity in the socialization of aggressive behavior. The mothers of the subjects with more disturbed level of adaptation patterns restricted the mobility of their children more, took longer in bowel training their children, had more severe feeding problems, caught their children before school, made high extramurally aggression demands on their children, and tended to use positive models for the child's behavior ("You can't see Mummy and Daddy using their hands to eat their food"). The mothers of the achievement-oriented pattern group of girls had greater obedience problems with their daughters, exerted greater modesty pressure, spanked more often, were more dominated by their children, were more likely to give their children regular jobs and chores, and felt their parents were less strict. For [illegible] males, there appears to be some differentiation between the [illegible] patterns. The 7, 4, and 7 groups fi

addition to being low on most of the foregoing variables (i.e., generally less punitive and severe early childhood experiences), were more often praised for good table behavior and for playing nicely with other children. On the 1958 follow-up measures, the Pattern 1 and 3 group girls displayed greater aggression anxiety as well as greater prosocial aggression.

Discussion

The results with the various level of aspiration measures appear to form a pattern with some consistency, and this is most clear for the goal discrepancy score. The statement of high goals relative to past achievement in young adults tends to be associated with earlier maternal punitiveness in the socialization of aggression and dependency, physical punishment, somewhat greater restrictiveness, and less material warmth in infancy by mothers who were more anxious about the rearing of their then five-year-old children. Although the pattern of results is more complex and involves many more variables than this, the most consistent core seems to lie here. Combining the three basic level of aspiration measures to yield the patterns and pattern groups did not produce any increment in or more meaningful clustering of the childrearing antecedents of level of aspiration behavior. Perhaps the pattern groups were too crude and general and what failed to emerge with our three groups might have shown up had we used the nine individual patterns. That was not possible with the size of the follow-up sample, however: the frequencies of the separate patterns were too small.

The meaning of low D scores is less clear and comes mainly by contrast with the opposite end of the dimension. Our findings suggest that failure-avoiding level of aspiration is associated with an early history of maternal

protectiveness, warmth, relative nonpunitiveness concerning aggression and dependency, and greater permissiveness in sexual socialization. It seems quite clear that while the extremes of the D score distribution may be more maladjusted, they do not have the same childrearing histories. The concept of maladjustment and its measurement typically include a variety of behavioral indications of disturbance, and the childrearing differences between high and low D score subjects in this study strongly suggest the futility of seeking a unimodal pattern of childrearing antecedents of maladjustment.

Even when due recognition is given to the very large number of correlations computed, of which our significant relationships are only a small fraction, it is something of a surprise that any kind of sensible cluster of maternal antecedents would emerge. The Sears et al study was designed as a broad-gauge investigation of the childrearing and child behavioral variables involved in identification, not as a study of goal-related self-evaluative behavior. One can point to the 10 year interval between the collection of the childrearing data and the measurement of level of aspiration and the fact that our subjects were but 5 years of age when their mothers reported on the rearing of their children. Certainly much of importance to later goal-striving behavior must have occurred during this long period, including increasing stress on achievement by parents and other social agents. Perhaps what the mothers reported of their childrearing attitudes and practices at age 5 represented some widely generalized attitudes and specific practices to appear at later points in the process of socialization. But that, of course, is sheer speculation. One would greet the present findings with surprise given the vagaries of maternal report of childrearing, too well known to the clinical investigator to require belaboring here. Finally, the

intercorrelations of childrearing practices in the original data, even within the same behavior system (e.g., aggression), were notably low, and it should not have come as a shock had we failed to find a meaningful cluster of childrearing correlates.

How much stock of confidence can be placed in the early childrearing--young adult level of aspiration relationships? Can the significantly associated childrearing variables be regarded as causal antecedents? The pattern of findings makes their acceptance more palatable than would be the case if no systematic order could be found, and the relationships with the factor scales lend plausibility since they cut across specific practices and represent dimensions of childrearing. But plausibility in a tentative sense is all we can now argue for. There is no way of determining which of the childrearing variables are critical for later level of aspiration -- without which, say, high discrepancies between goals and past achievement would simply not appear. There is no ready way of determining which are the critical variables and which simply covary with the antecedents or are, indeed, spurious.

There is probably a temptation to reduce the import of these findings to the simple statement that the mothers of subjects with high goal discrepancy scores were more severe across the board--that general severity of socialization accounts for the results. That was not true, of course: the mothers of high D score subjects were punitive socializing agents only in certain areas. In fact, the level of aspiration measures did not correlate significantly with the severity of socialization scale which summed over the major behavior systems.

Our findings suggest that the early childrearing correlates of level of aspiration differ from those of nAchievement. Winterbottom (1958) found

early independence training and reward of the child's attempts at self-reliance and mastery to be associated with high nAchievement. Our high D score subjects, to the contrary, tended to be somewhat more restricted in physical mobility and at home, which does not seem much like independence training. Such a distinction between nAchievement and level of aspiration is complicated, however, by the fact that Feld's (1960) follow-up of Winterbotton's subjects revealed a striking reversal: at age 14-16, nAchievement was negatively correlated with contemporary maternal stress on independence. To be noted, too, is the age difference between the Sears et al children when the interviews were conducted and Winterbottom's 8-10 year olds: Independence training of the Sears et al children would necessarily have been curtailed by their age. The early emphasis on school achievement by the mothers of high D score children, on the other hand, would be consistent with the development of high nAchievement (cf. Moss & Kagan, 1961). It seems clear that the issue cannot be arbitrated by the present data.

The findings of this study argue for recognizing clearly the important partition between initial exploration of antecedent variables and the establishment of relationships firmly anchored in both quasi-naturalistic observation and the experimental manipulation of stimulus events. The present findings must be regarded with an eye jaundiced by tentativeness if not scepticism. They are heuristic for future research, but there comes a time with any personality variable when it is time to stop doing studies like this one.

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Table 2

Demographic Comparisons of the Follow-up

and 1957 Samples

Variable		Follow-up Sample		1957 Sample	
		Males	Females	Males	Females
Socio-economic Status	N	46	37	193	160
	M	3.940	4.114	3.233	3.206
	SD	1.663	2.350	2.131	2.152
Number of Children in Family	N	46	37	202	174
	M	2.520	2.676	2.520	2.724
	SD	1.150	1.512	1.102	1.231

Table 7

Significant Correlations Between Childrearing Variables and Three Level of Aggression Scores for Males

Scale	2 Years	4 Years	6 Years
	M F	M F	M F
23 Amount of mother's affectionate interaction with baby	-.27		
29 Warmth, affectional bond, closeness of infant		-.28*	
34 Severity of reaction to vomiting	-.25		
35 Severity of handling feeding problems	-.24		
40 Severity of physical punishment during meals			
41 Age at which spanking for table manners started	-.33		
54 Severity of reprimand for modesty		-.31	
56 Number of no's per interaction			
57 Severity of pressure exerted toward toilet training			
58 Severity of pressure against masturbation	-.37*		
59 Severity of mother's tendency to worry about child's health			
61 Severity of rules regarding cleanliness of child	-.44		
62 Severity of pressure that child be quiet			

Code	Scale	P Score		A Shifts		Unusual Shifts	
		N	C	H	E	I	K
[illegible] 32	Does child think about deviation					45	.41
[illegible] 39	Setting up negative models			44	.44		
[illegible] 40	Frequency with which mother sparks					41	.27*
[illegible] 55	Warmth of contact from environment					43	.28*
[illegible] 57	Extent of use of reasoning			37	.31*		
[illegible] 60	How often punishes child for [illegible]			43	.31	45	.43
[illegible] 63	Does [illegible] stay with child when [illegible]			33	.37*	37	.43
[illegible] 70	Response [illegible] of [illegible]	46	.39				

Table 3

Significant Correlations Between Childrearing Variables and

Three Level of Aspiration Scores for Females

Code		Scale	LOA D Score		LOA # Shifts		LOA # Unusual Shifts	
			N	E	N	E	N	E
I	5	Number of children in family	37	.29*				
I	13	Separations from mother after 24 months	37	.32				
I	23	Amount of mother's affectionate interaction with baby			37	-.41	37	-.32*
I	30	Scheduling of feeding					37	.63
I	40	Restriction of physical mobility during early	32	.43				
I	43	Duration of bowel training	36	.35				
I	52	Child's reaction to toilet training	37	-.34				
I	57	Severity of unusual upbringing			37	-.40		
I	61	Strictness of toilet training and [illegible]					37	.37
I	62	Preference about order	37	.41				
I	67	Restriction of adult's TV	36	-.37				
I	69	Restrictions on physical mobility					36	.32
I	71	Encouragement with dominance	37	-.40				
I	72	Parent-child dependency [illegible]					37	

Table 3, Cont.

Code	Scale	Boys		Girls		Combined Sexes	
		N	r	N	r	N	r
III 26	Demands for child to be aggressive					54	.43
III 27	Extent child encouraged to fight back					27	.39
III 28	Permissiveness for inappropriate aggression towards children			37	.34		
III 32	Does child tell about deviation			30	.30		
III 36	Extent of use of [illegible]	[illegible]		36	.[illegible]		
III 38	Setting up positive models					35	.47
III 71	Does child [illegible]			37	.[illegible]		
III 73	Parents' [illegible]			37	.[illegible]		
IV 20	[illegible]					54	.37
IV 23	[illegible]						
V 7	[illegible]					54	.31
	[illegible]					54	.41
	[illegible]					54	.31
	[illegible]					54	.37
	[illegible]					54	.33
	[illegible]					54	.33

Table 4

Significant Correlations Between Child-rearing Variables and

Three Level of Abstraction Scores for Both Sexes

Code	Scale	D Score		# Shifts		LOA	
		N	E	N	E	N	E
II	[illegible]	83	.37				
II	[illegible]			[illegible]	-.28		
II	[illegible]			[illegible]	-.20*		
II	[illegible]	63	[illegible]				
II	40 [illegible]	74	.25			74	.26
II	42 [illegible]	83	[illegible]				
II	54 [illegible]			[illegible]	[illegible]		
II	[illegible]	83	[illegible]				
III	[illegible]			[illegible]	.32*		
III	[illegible]						
III	[illegible]						
III	[illegible]						
III	[illegible]						
III	[illegible]						
III	[illegible]						
III	[illegible]						
III	[illegible]						

Table 1 Cont.

Role		Scale	LOA			
			# Scores		# Shifts		# Diagonal Shifts	
			N	r	N	r	N	r
II.	36	Extent of use of tangible rewards	82	.25	82	.31		
III	38	Setting up positive models					79	.32
III	39	Setting up negative models			80	.27		
III	46	Frequency with which mother spanks	75	.24			75	.24
III	46	Extent of use of physical punishment	82	.27				
II	1	[illegible]						
II	2	[illegible]			81	-.25*		
II	3	Mother strict in terms?					76	-.26
II	4	Does father think mother too str ct			84	.26		
II	5	Division of labour between husband and wife			79	-.22*		
IV	15	Husband's reaction to wife's pregnancy	76	.23				
IV	16	Husband's attitude toward current baby	81	.23				
IV	17	Husband current stricter	82	-.27				
IV	20	Wife's rejection of child			79	-.24		
IV	21	Wife's childrearing anxiety	73	-.23				
V	1	Punishment for dependency, and use of isolation outlet	81	-.25			71	.27
		Permissiveness re punishment	82	-.23				
		Summary punitiveness score	83	-.27				.30
		Jersild's index, SUS						.26
		Hollister: Proportion of social responses contingent upon withdrawal of love					71	.23

Table 4, Cont.

Code	Scale	D Score		# Shifts		% Unusual Shifts	
		N	r	N	r	N	r
	Reaction to child starting school					82	.24
	Summary, total school responsiveness					83	.21

* = p < .10

Table 5

Summary of Differences Between TOA Pattern Groups* on Childrearing Variables for Males

Code	Scale	p from ANOV	Significant Between-Group Differences
II 41	Restrictions on use of fingers for eating	.02	3 2
II 43	Level of demand for table manners	.005	3 1 (.10); 3 2
II 58	Permissiveness concerning sex play	.08	1 3 (.10); 2 3
II 59	Severity of pressures against sex play	.01	3 1; 3 2
III 10	Amount of dependency child shows	.08	3 2
III 26	Demands for child to be aggressive	.05	1 2; 3 2
III 53	Extent of use of withdrawal of love	.04	2 3
III 57	Extent of use of reasoning	.06	2 3
III 64	Amount of caretaking father does now	.06	2 3
IV 9	How much child takes after father	.03	1 3; 2 3 (.10)
IV 19	Mother's dissatisfaction with current situation	.03	3 2; 3 1
IV 31	Mother's childrearing anxiety	.03	3 1 (.10); 3 2
	Summary worrisomeness scale	.01	3 2
	Cough Proficiency Scale (10% follow-up)	.05	1 1; 3 2 (.10)
	Peaceful Aggression Scale (10% follow-up)	.01	2 1; 3 1 (.10)

* Group 1 is the mixture 1 and 3 group; 2 as per text; 3, 4, and 7.

3 is pattern 5, 6, 8, and 9

Table 6

Summary of Differences Between LCA Pattern Groups* on Childrearing Variables for Females

Code		Scale	p from ANOV	Significant Between-Group Differences
II	40	Age difference between child and next-younger sibling	.02	3>1; 3>2
II	36	Severity of feeding	.05	3>1 (.10); 3>2
II	37	Severity of feeding problems	.07	3>2
II	42	Severity of praise for good behavior at table	.03	3>1
II	49	Severity of bowel training	.05	3>1; 3>2
II	54	Severity of pressure for mastery	.05	1>2; 1>3
II	61	Restrictiveness on physical mobility	.003	3>1; 3>2
II	70	Strict child rearing jobs and chores	.08	1>2
II	71	Severity of punishment with obedience	.06	1>2
III	16	Amount of teaching before child starts school	.07	1>2
III	17	Child's demands for teaching	.02	1>2
III	23	Severity of punishment with aggression	.005	3>1; 2>3 (.10)
III	24	Severity of child to be responsible	.07	1>2
III	25	Severity of child encouraged to fight back	.04	1>2
III	27	Severity of aggression toward parents	.04	1>2
III	31	Severity of sex play punished	.005	3>1; 3>2
III	32	Severity of sex play punished	.02	1>2
III	33	Severity of sex play punished	.07	1>2
IV	72	Severity of child dominance	.004	1>2; 1>3
IV	73	Severity of child dominance	.03	1>2

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Table 5, Cont.

Code		Scale	p from ANOV	Significant Between-Group Differences
47	7	Punishment for dependency, amount of irritation mother feels	.005	1 2; 3 2
		Summary: severity of aggression training	.02	1 2 ; 3 2 (10)
		Summary punitiveness scale	.002	1 2; 3 2
		Aggression Anxiety Scale (1953 to follow-up)	.03	1 2; 3 2
		Prosocial Aggression Scale (1953 to follow-up)	.00*	1 2; 3 2

* Group 1 is the patterns 1 and 5 groups; 2 is patterns 2, 4, and 7, 3 is patterns 3, 6, 8, and 9